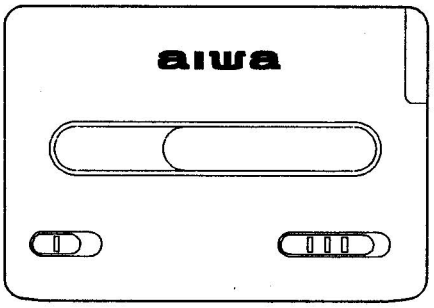
aiwa

aiwa SERVICE

HS-PX257
HS-CX130



STEREO CASSETTE PLAYER

• BASIC TAPE MECHANISM: 4ZM-1 P5N

• TYPE: Y1.YU.YJ1 <257>
Y1 <130>

SERVICE MANUAL

S/M Code No. 09-963-130-80I

SPECIFICATIONS

Maximum output:	10 mW+10 mW (EIAJ 32 Ω)
Power sources:	DC 3 V using two R03 (AAA) dry cell batteries
Battery life (EIAJ 1 mW output)	: Using two LR03 (AAA) alkaline batteries; Approx. 13 hours
Maximum dimensions:	110.1 (W) × 78.6 (H) × 24.3 (D) mm
Weight:	Approx. 140 g excluding batteries

- Design and specifications are subject to change without notice.
- Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
- "DOLBY" and the double-D symbol □□ are trademarks of Dolby Laboratories Licensing Corporation.

■ ACCESSORIES／PACKAGE LIST

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	カンリ NO.	DESCRIPTION
1	87-048-309-019		HP-24NAN<EXCEPT 257YU>
1	87-048-311-019		HP-A270A F<257YU>
2	85-HKD-901-019		IB,EX-EGFSIC<EXCEPT 257YU>
2	85-HKD-902-019		IB,EX-ESF<257YU>

CAUTIONS WHEN SERVICING

When the main circuit board is opened during servicing, operation cannot be checked because the motor terminals, etc. are soldered directly to the board.

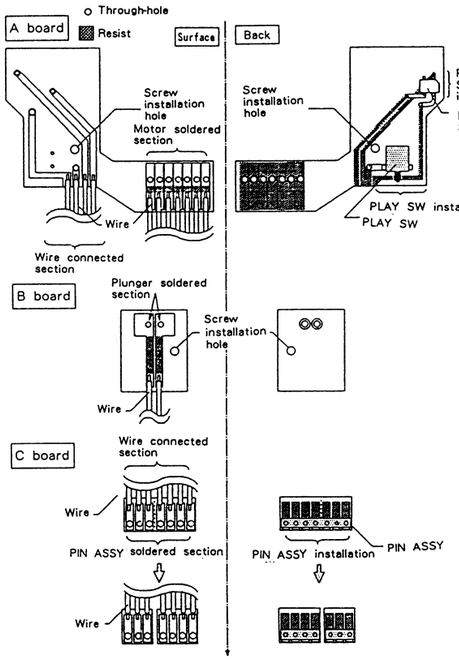
Use a jig (for the 4ZM-1) to check operation with the main circuit board open.

Part Description : 4ZM-1 JIG KIT, Part No. 09-001-323-010

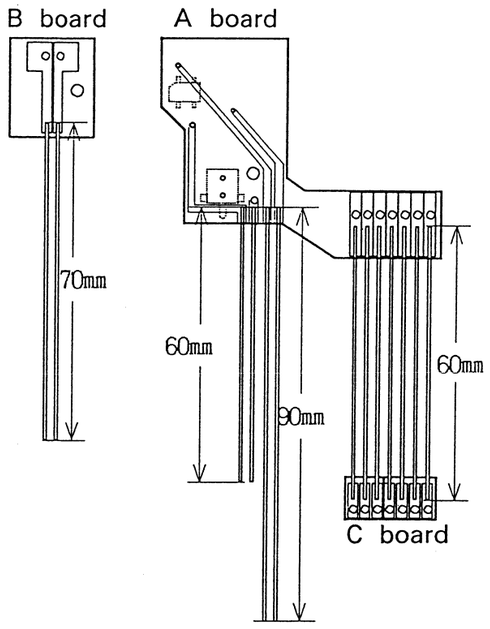
1. Assembling the Jig

Install the jig, referring to the following diagrams.

1) Divide the 6-pin flat cable to create three 2-pin wires.
2) Solder the C-SW PUSH and P-SNSR to the A board.
3) Solder the 7-pin flat cable and two 2-pin wires to the A board.
4) Solder the 2-pin wire to the B board.
5) Attach the PIN ASSY to the C board and solder it to the other end of the 7-pin flat cable which has been soldered to the A board.



Details of Jig and Assembly



Jig Complete View

2. Attaching the Jig

A board

- Fix the A board to the mechanism using the main board holding screws.
- Solder the motor terminals.
- Solder wires Ⓐ and Ⓑ to the PHOTO SENSOR.
- Solder wires Ⓒ and Ⓓ to the PLAY SW.

B board

- Fix the B board to the mechanism using the main board holding screws.
- Solder the plunger terminals.
- Solder wires Ⓔ and Ⓕ to plunger land on the MAIN board.

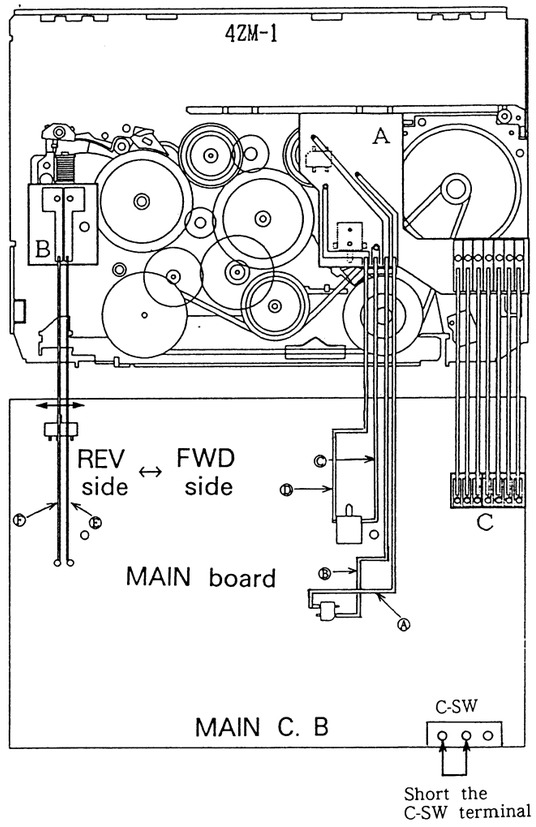
C board

- Solder the PIN ASSY on the C board to motor land on the MAIN board.

3. Using the Jig

When the circuit board is opened, the operation switches on the board are at the back. To increase working efficiency, use the remote control to operate the unit.

1) Connect the remote control to the unit.
2) Set the Hold Switch to OFF.
3) Short the C-SW terminal.
4) Be careful that no external light enters the photosensor on the MAIN board to prevent a malfunction.
5) Switch the F/R SW to match the running of tape.



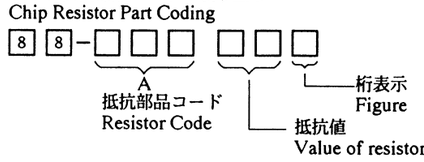
ELECTRICAL MAIN PARTS LIST

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

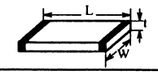
REF. NO	PART NO.	カンリ NO.	DESCRIPTION
IC			
	87-002-423-089		IC,TA2002 FN(ER)
	87-001-875-089		IC,BA1106 FS
	87-017-775-080		IC,TB2003-008FN
	87-002-406-080		IC,TPIC326ADB
TRANSISTOR			
	87-026-605-080		C-TR,IMH10
	87-026-604-089		C-TR,IMH9
	87-026-585-089		C-TR,IMX1 HQQ
	89-327-125-089		C-TR,2SC2712GR
	89-333-266-089		C-TR,2SC3326B
	89-113-625-089		C-TR 2SA1362GR(TAPG)
	87-026-461-080		C-TR,IMH3
	87-026-603-089		C-TR,IMB10
	87-026-346-089		C-TR,DTC114YU
	87-026-423-089		C-TR,RN2305
	87-026-349-089		C-TR,DTC143TU
DIODE			
	87-017-779-080		C-DIODE,1SS355
MAIN C.B			
C101	87-010-173-089		C-CAP,S 390P-50 SL
C102	87-010-173-089		C-CAP,S 390P-50 SL
C103	87-010-173-089		C-CAP,S 390P-50 SL
C104	87-010-173-089		C-CAP,S 390P-50 SL
C105	87-016-296-089		C-CAP,TN 22-4 SV(A)
C106	87-016-296-089		C-CAP,TN 22-4 SV(A)
C107	87-016-296-089		C-CAP,TN 22-4 SV(A)
C108	87-010-958-089		C-CAP,S 0.01-25 B J
C109	87-010-958-089		C-CAP,S 0.01-25 B J
C110	87-010-198-089		C-CAP,S 0.022-25 B
C111	87-010-198-089		C-CAP,S 0.022-25 B
C112	87-016-462-089		C-CAP,S 1-16 F
C113	87-016-462-089		C-CAP,S 1-16 F
C114	87-010-944-089		C-CAP,E 220-4
C115	87-010-851-089		C-CAP,47-4
C116	87-010-193-089		C-CAP,S 0.033-25 F
C117	87-010-193-089		C-CAP,S 0.033-25 F
C118	87-010-186-089		C-CAP,S 4700P-50 B
C119	87-010-186-089		C-CAP,S 4700P-50 B
C120	87-010-197-089		C-CAP,S 0.01-25 B
C121	87-010-197-089		C-CAP,S 0.01-25 B
C122	87-010-193-089		C-CAP,S 0.033-25 F
C123	87-010-193-089		C-CAP,S 0.033-25 F
C124	87-010-196-089		C-CAP,S 0.1-25 F
C125	87-010-196-089		C-CAP,S 0.1-25 F
C126	87-016-462-089		C-CAP,S 1-16 F
C127	87-016-462-089		C-CAP,S 1-16 F
C128	87-016-462-089		C-CAP,S 1-16 F
C129	87-016-462-089		C-CAP,S 1-16 F
C130	87-010-196-089		C-CAP,S 0.1-25 F
C131	87-010-196-089		C-CAP,S 0.1-25 F
C132	87-016-462-089		C-CAP,S 1-16 F
C133	87-016-462-089		C-CAP,S 1-16 F
C134	87-010-182-089		C-CAP,S 2200P-50 B
C135	87-010-182-089		C-CAP,S 2200P-50 B
C136	87-010-424-089		C-CAP,TN 4.7-4
C137	87-010-424-089		C-CAP,TN 4.7-4
C138	87-010-196-089		C-CAP,S 0.1-25 F
C139	87-010-196-089		C-CAP,S 0.1-25 F
C140	87-016-296-089		C-CAP,TN 22-4 SV(A)
C141	87-010-853-089		C-CAP,220-4V H5.5
C142	87-016-462-089		C-CAP,S 1-16 F
C143	87-012-141-089		C-CAP,S 0.22-16 F
C144	87-010-853-089		C-CAP,220-4V H5.5
C145	87-010-853-089		C-CAP,220-4V H5.5
C148	87-010-746-089		C-CAP,TN 10-4
C201	87-016-350-040		CAP,E 470-4 MA GAS
C202	87-016-462-089		C-CAP,S 1-16 F
C203	87-010-971-089		C-CAP,S 4700P-50 B J
C204	87-015-923-089		C-CAP,TN 0.22-35
C206	87-016-317-080		C-CAP,TN 2.2-6.3
C302	87-010-196-089		C-CAP,S 0.1-25 F
C303	87-015-923-089		C-CAP,TN 0.22-35
C304	87-010-197-089		C-CAP,S 0.01-25 B
C305	87-010-194-089		C-CAP,S 0.047-25 F
C306	87-016-461-089		C-CAP,S 0.47-16 F
C307	87-010-504-089		C-CAP,TN 0.47-25
C308	87-010-194-089		C-CAP,S 0.047-25 F
C309	87-016-461-089		C-CAP,S 0.47-16 F
D101	87-001-167-089		C-DIODE,1SS302
D201	87-017-026-019		LED KLR 226 RED
J101	87-099-687-010		JACK,3.5 BLK 4H
PS201	87-017-793-089		P-SNSR GP2L27
R101	87-022-215-089		C-RES,U 1K-1/16W F
R102	87-022-215-089		C-RES,U 1K-1/16W F
R103	87-022-283-089		C-RES,U 820-1/16W F
R104	87-022-283-089		C-RES,U 820-1/16W F
R107	87-022-292-089		C-RES,U 330K-1/16W F
R108	87-022-292-089		C-RES,U 330K-1/16W F
R109	87-022-243-089		C-RES,U 15K-1/16W F
R110	87-022-243-089		C-RES,U 15K-1/16W F
R212	87-022-293-089		C-RES,U 390K-1/16W F
R213	87-022-287-089		C-RES,U 120K-1/16W F
R318	87-022-037-089		C-RES,M M/F0.68
S101	87-036-379-089		C-SW,SL 1-1-2
S102	87-036-379-089		C-SW,SL 1-1-2
S103	87-036-379-089		C-SW,SL 1-1-2
S202	87-036-383-089		C-SW SL 1-1-2(NC)E
S203	87-036-237-089		C-SW,PUSH
S204	84-HK3-604-110		SW,LEAF 4ZM-1P
S205	87-036-379-089		C-SW,SL 1-1-2
S206	87-036-308-089		C-SW,TACT(112HST)
S207	87-036-308-089		C-SW,TACT(112HST)
S208	87-036-308-089		C-SW,TACT(112HST)
S209	87-036-308-089		C-SW,TACT(112HST)
SFR301	87-024-689-089		C-SFR,6.8K TMC3K
VR101	87-024-640-089		C-VR,20KCX2 DIA14
HEAD FLEX. C.B			
PH	82-HJ4-601-119		HEAD ASSY

○チップ抵抗部品コード/CHIP RESISTOR PART CODE

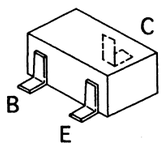
チップ抵抗部品コードの成り立ち
Chip Resistor Part Coding



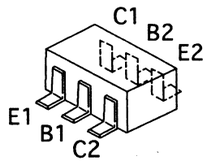
チップ抵抗
Chip resistor

容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法(mm)/Dimensions 外形/Form	L	W	t	抵抗コード :A Resistor Code: A
1/16W	1608	± 5%	CJ		1.6	0.8	0.45	108
1/10W	2125	± 5%	CJ		2	1.25	0.45	118
1/8W	3216	± 5%	CJ		3.2	1.6	0.55	128

TRANSISTOR ILLUSTRATION



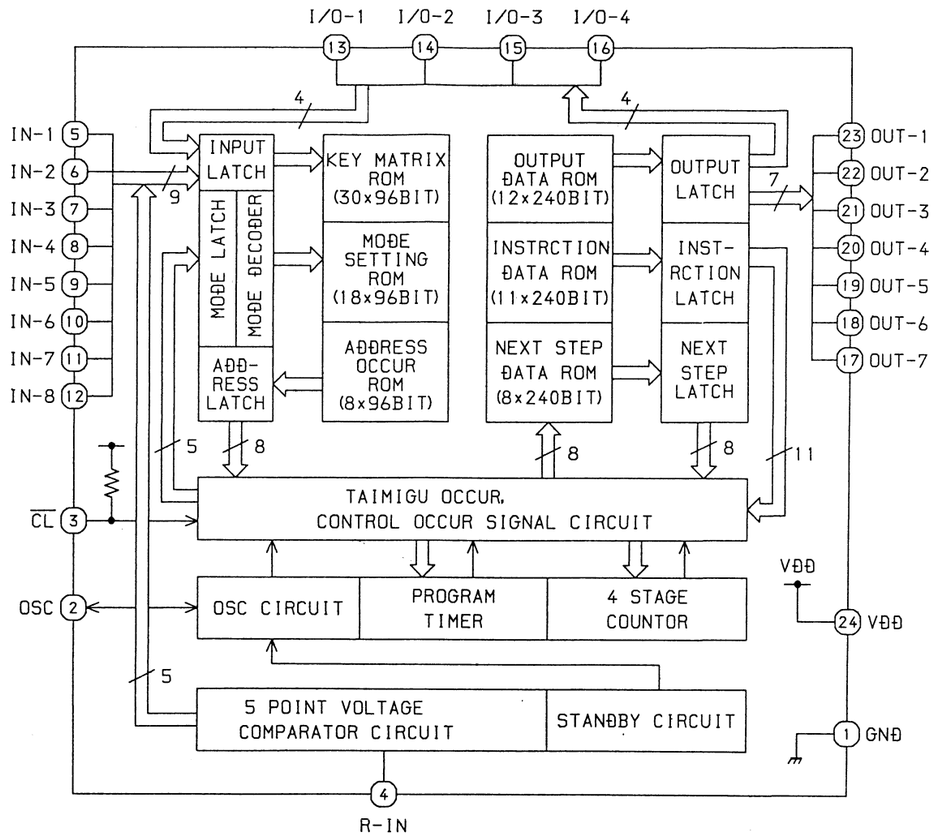
2SA1362
2SC2712
2SC3326
DTC114YU
DTC143TU
RN2305



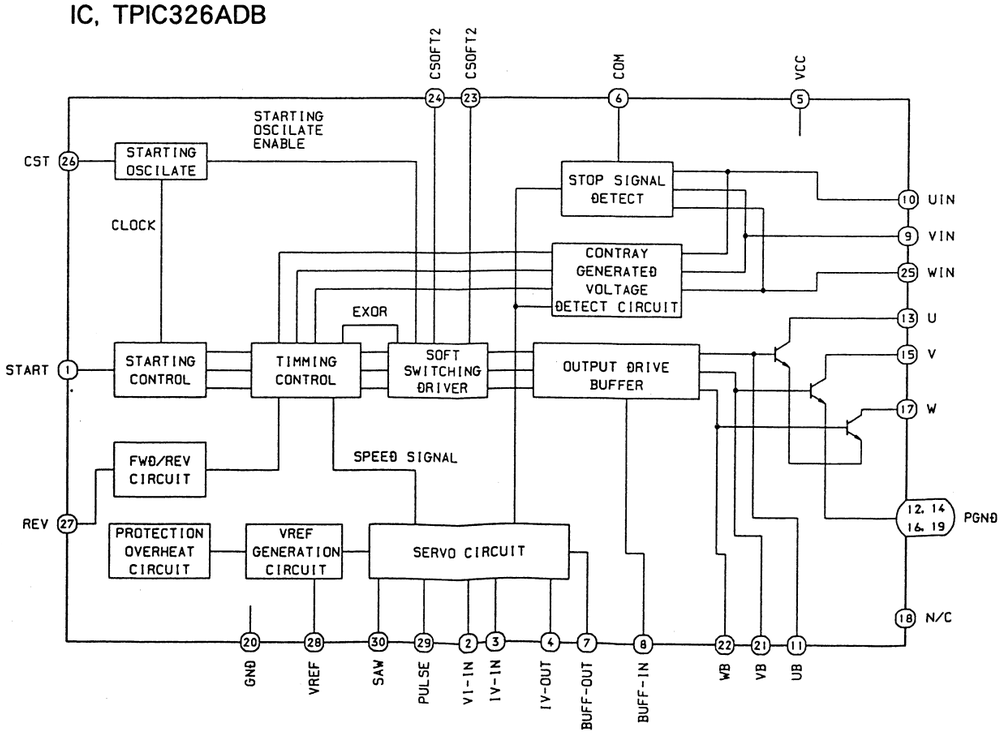
IMB3
IMH3
IMH9
IMH10
IMX1

IC BLOCK DIAGRAM

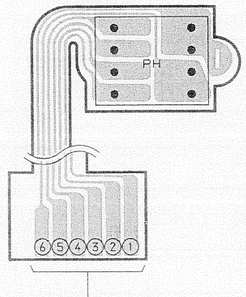
IC, TB2003 – 008FN



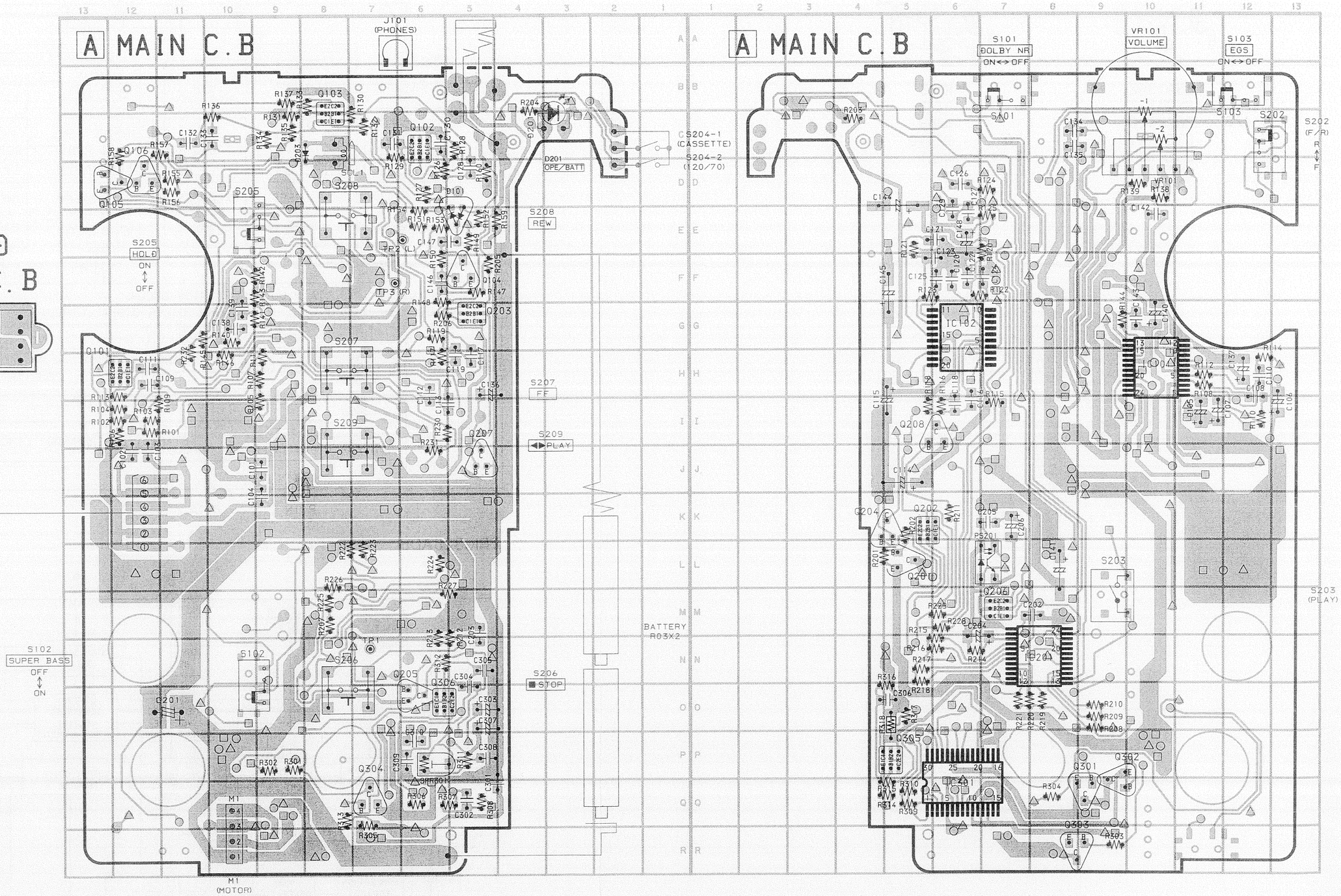
IC, TPIC326ADB



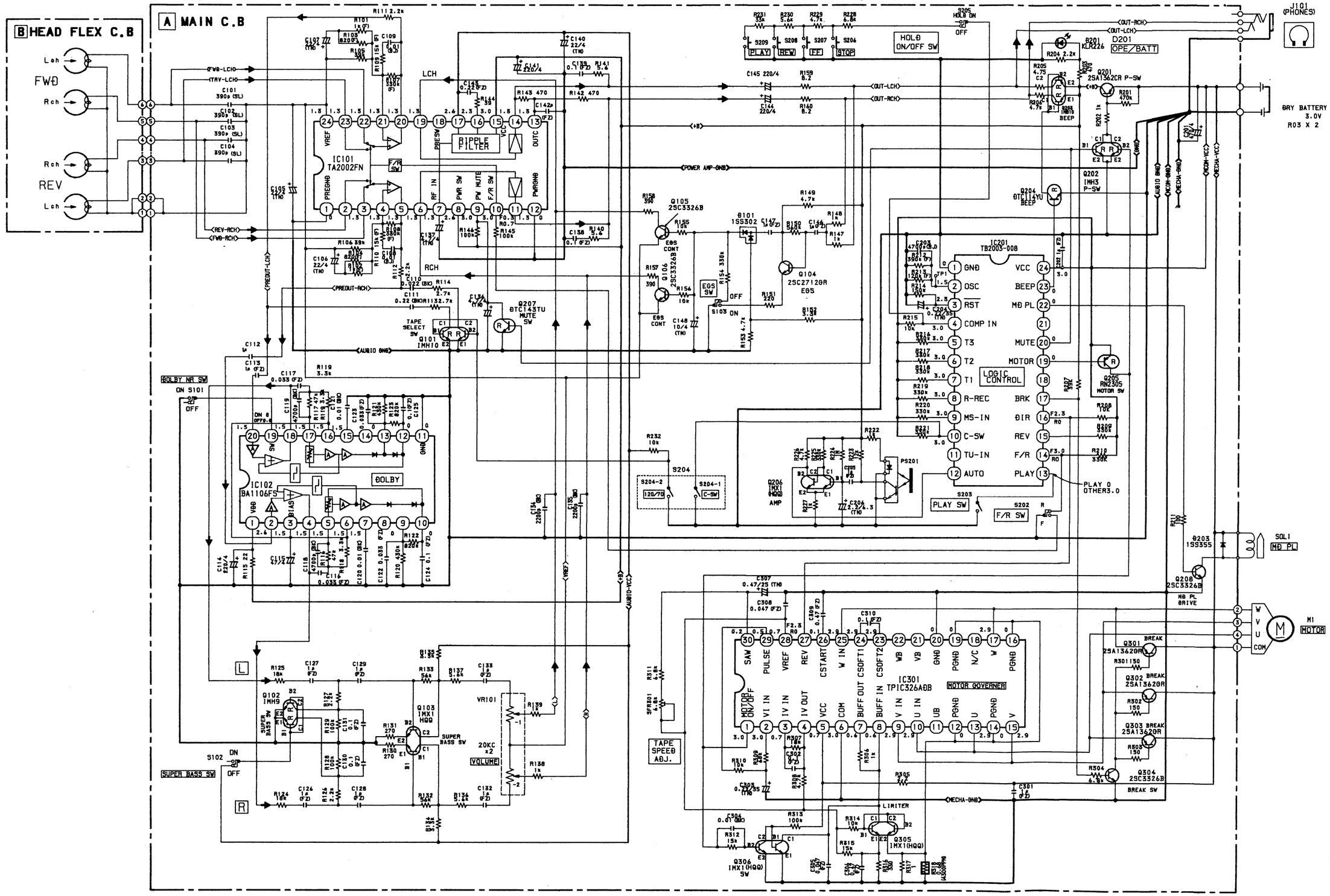
B HEAD
FLEX. C. B

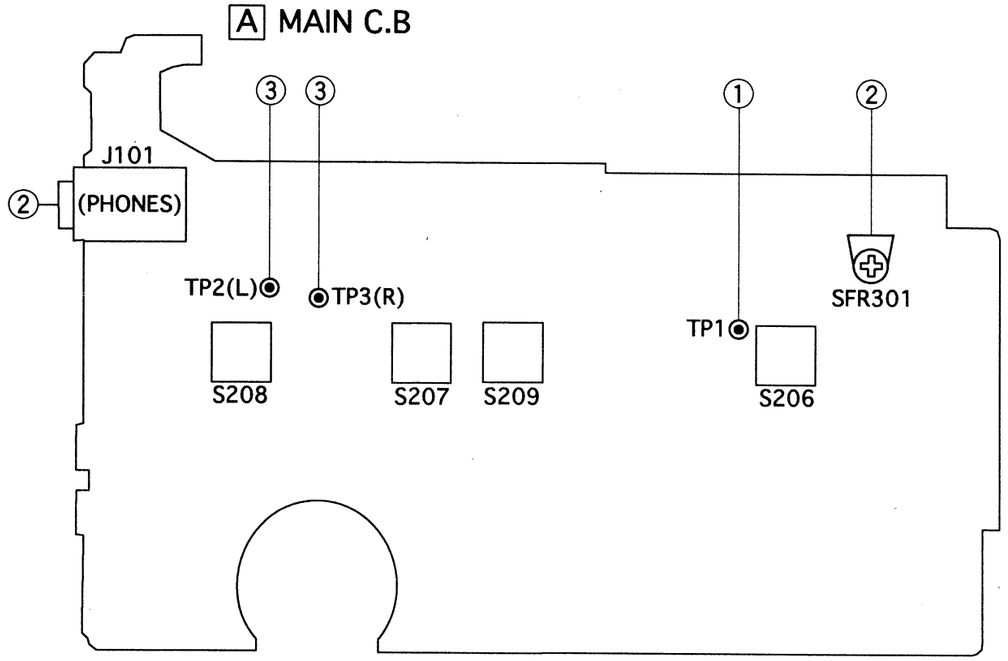


A MAIN C.B



A MAIN C.B


B HEAD FLEX C.B
Lch
FWD
Rch
Rch
REV
Lch
A MAIN C.B
IC101 TA2002FN
RIPPLE FILTER
LCH
RCH
IC102 BA1106FS
DOLBY
DOLBY NR SW ON S101
S102 SUPER BASS SW
SUPER BASS SW
VOLUME
TAPE SPEED ADJ.
TAPE SELECT SW Q101 IMH10
Q102 IMH9
Q103 IMX1 HQQ
Q104 2SC2712GR E05
Q105 2SC3326B
Q106 2SC3326B
Q207 DTC143TU MUTE SW
HOLD ON/OFF SW
S209 PLAY
S208 REW
S207 FF
S204 STOP
S205 HOLD ON OFF
S204-2 120/70
S204-1 C-SW
PLAY SW
S203
S202 F/R SW
D201 OPE/BATT
Q201 2SA1362GR P-SW
Q202 IMH3 P-SW
Q204 DTC114YU BEEP
Q205 RN2305 MOTOR SW
Q206 IMX1 HQQ AMP
PS201
IC201 TB2003-008
GND
OSC
RST
COMP IN
T3
T2
T1
R-REC
MS-IN
C-SW
TU-IN
AUTO
VCC
BEEP
MD PL
MUTE
MOTOR
BRK
DIR
REV
F/R
PLAY
LOGIC CONTROL
PLAY 0 OTHER3.0
J101 (PHONES)
BRY BATTERY 3.0V R03 X 2
IC301 TP1C326ADB
MOTOR GOVERNER
SAW
PULSE
VREF
REV
CSTART
W IN
CSOFT1
CSOFT2
WB
VB
GND
PGND
N/C
W
V IN
U IN
UB
U
V
MOTOR ON/OFF
VI IN
IV IN
IV OUT
VCC
COM
BUFF OUT
BUFF IN
Q301 2SA1362GR BREAK
Q302 2SA1362GR BREAK
Q303 2SA1362GR BREAK
Q304 2SC3326B BREAK SW
Q305 IMX1(HQQ) LIMITER
Q306 IMX1(HQQ) SW
Q208 2SC3326B MD PL DRIVE
D203 1SS355
SOL1 MD PL
M1 MOTOR
W
V
U
COM
LIMITER
MECHA-GND
POWER AMP-GND
AUDIO GND
+B
OUT-RCH
OUT-LCH
REC-RCH
FWD-RCH
TRY-LCH
PREOUT-LCH
PREOUT-RCH
VREF
AUDIO-VCC



1. Clock Frequency Check
   Setting: · Test point: TP1
   Method: Connect a 1MΩ resistor between the frequency counter and test point (TP1), and Check the frequency counter reads 2800Hz～3460Hz.

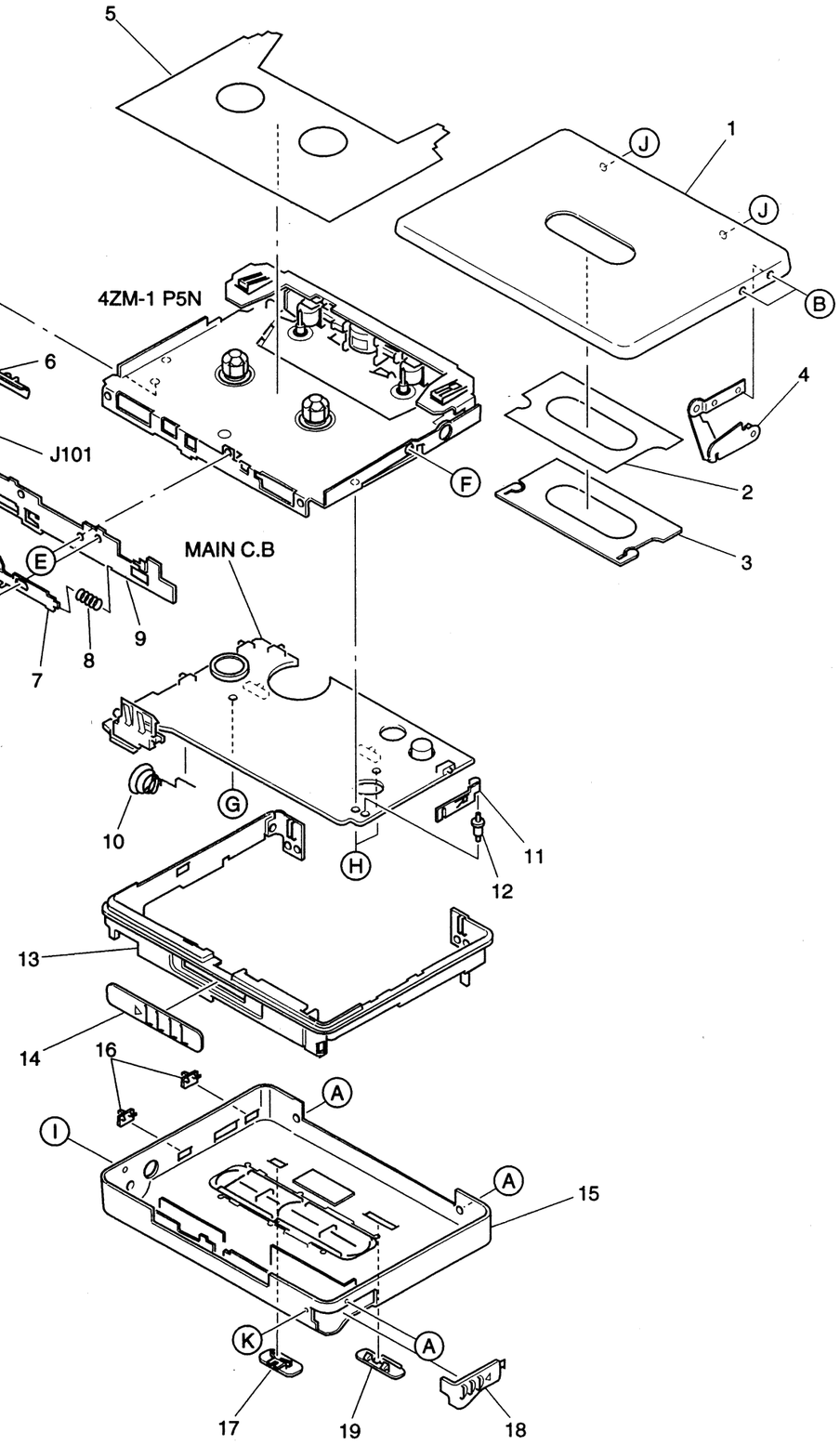
2. Tape speed Adjustment
   Setting: · Test tape: TTA-100
   · Test point: PHONES JACK
   · Adjustment point: SFR301
   Method: Playback the test tape (TTA-100) and adjust SFR301 become 3015±15Hz.

3. DOLBY Level Check
   Setting: · Test tape: TTA-200
   · Test point: TP2 (Lch), TP3 (Rch)
   · DOLBY SW: OFF
   · SUPER BASS SW:OFF
   Method: Connect an electrolytic capacitor (10μF/16V) to measured equipment and TP2(TP3),and check the voltage for 100mV±1.0dB.

4. Head Azimuth Adjustment
   This model is no azimuth adjustment.

PRACTICAL SERVICE FIGURE

Tape sppd:	3015Hz±50Hz
Wow & flutter:	Less than 0.45%(RMS)
Take-up torqe:	22～35g-cm(FWD,REV)
F.F torqe :	70～140g-cm
Rew torqe:	60～100g-cm
Back tension:	2.0～3.5g-cm(FWD,REV)
S/N ratio:	More than 45dB
Distortion:	Less than 3%
Noise ievel:	Less than 3.0mV(VOL MAX, DC)
	Less than 0.3mV(VOL MIN, DC)
Frequency Response:	8kHz±3dB
	315Hz±3dB

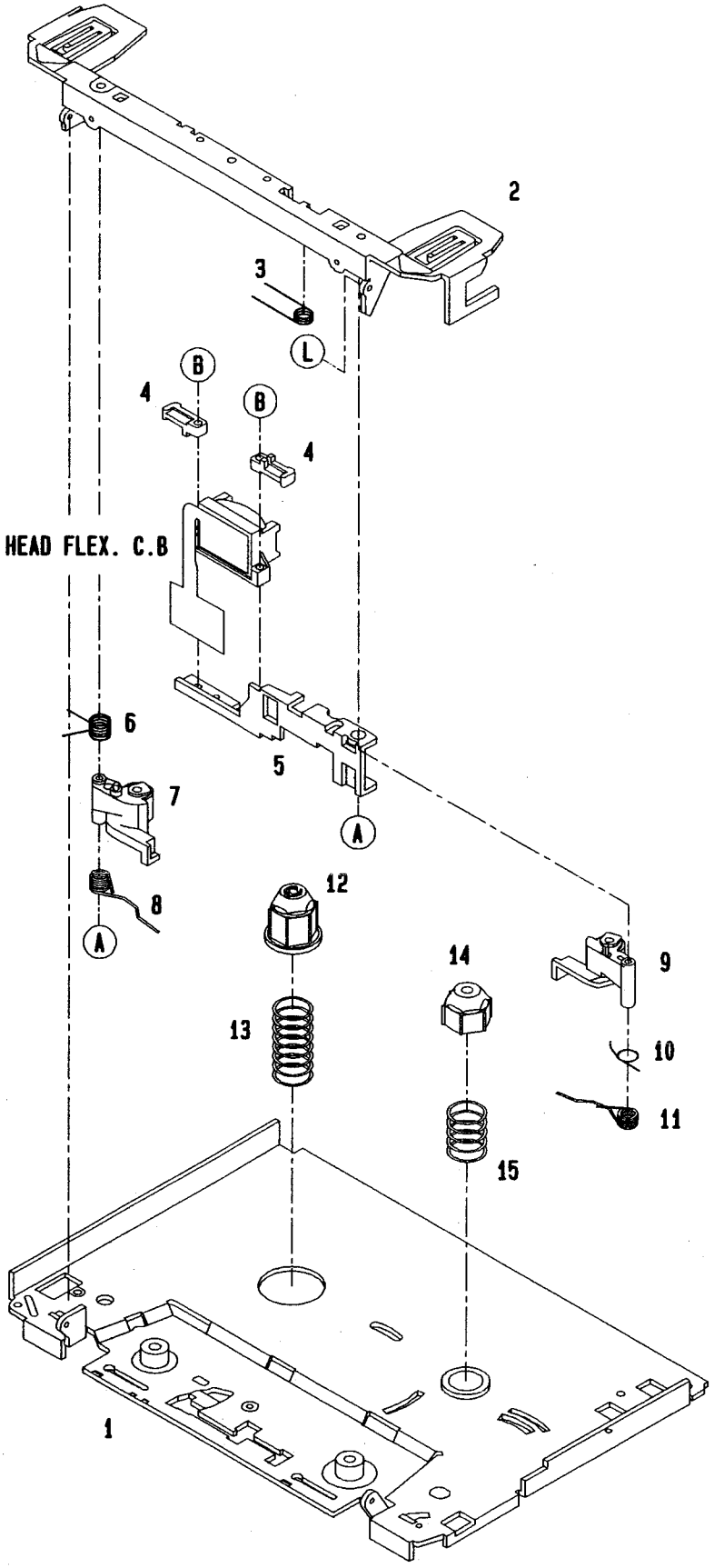


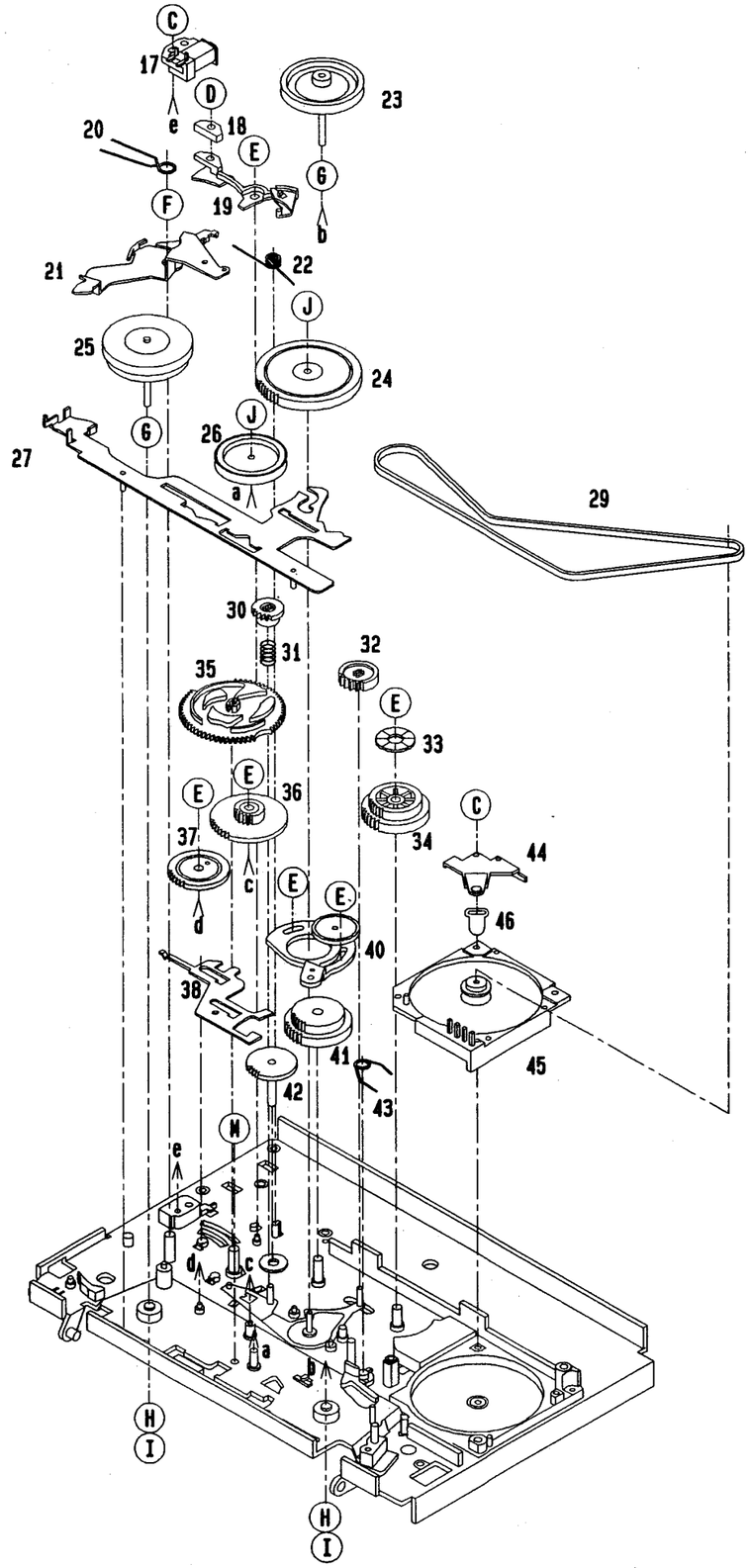
MECHANICAL PARTS LIST 1／1

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	カンリ NO.	DESCRIPTION
1	85-HKD-002-010		LID,CASS ASSY<257[B]Y1,257[B]YU 257[B]YJ1>
1	85-HKD-007-010		LID,CASS ASSY<130[L]Y1>
1	85-HKD-009-010		LID,CASS ASSY<130[P]Y1>
1	85-HKD-025-010		LID,CASS ASSY<257[L]Y1>
1	85-HKD-027-010		LID,CASS ASSY<257[P]Y1>
2	85-HK4-217-010		AD,SH WINDOW A
3	85-HK4-010-010		WINDOW,CASS A
4	85-HK6-201-010		ARM,HINGE ASSY
5	85-HKD-004-010		PLATE,CHAS<EXCEPT 130[L]Y1 130[P]Y1,257[B]YJ1>
5	85-HKD-020-010		PLATE,CHAS<130[L]Y1,130[P]Y1>
5	85-HKD-021-010		PLATE,CHAS<257[B]YJ1>
6	84-HK6-203-019		HLDR,CONT
7	85-HR4-212-010		LOCK,PLT
8	85-HK6-206-019		SPR-C,LOCK
9	85-HK4-206-010		BASE,LOCK ASSY
10	85-HK6-202-019		SPR-C,BAT CONT M
11	84-HR4-215-010		BAT,CONT P
12	85-HK6-207-010		SHAFT,BAT
13	85-HK6-005-010		FRAME,CENTER
14	85-HK6-011-010		KNOB,SL OPEN
15	09-028-233-010		CABI,REAR ASSY<257[B]Y1,257[B]YU 257[B]YJ1>
15	09-028-234-010		CABI,REAR ASSY<130[L]Y1>
15	09-028-235-010		CABI,REAR ASSY<130[P]Y1>
15	09-028-248-010		CABI,REAR ASSY<257[L]Y1>
15	09-028-249-010		CABI,REAR ASSY<257[P]Y1>
16	84-HK6-010-019		KNOB,SL D<257[B]Y1,257[B]YU 257[B]YJ1>
16	84-HKC-023-019		KNOB,SL D<EXCEPT 257[B]Y1 257[B]YU,257[B]YJ1>
17	85-HK6-013-010		KNOB,SL HOLD<257[B]Y1,257[B]YU 257[B]YJ1>
17	85-HKD-013-010		KNOB,SL HOLD<EXCEPT 257[B]Y1 257[B]YU,257[B]YJ1>
18	85-HK6-004-010		LID,BAT<257[B]Y1,257[B]YU 257[B]YJ1>
18	85-HKD-015-110		LID,BAT<130[L]Y1,257[L]Y1>
18	85-HKD-016-110		LID,BAT<130[P]Y1,257[P]Y1>
19	85-HKD-012-010		KNOB,SL SBASS<257[B]Y1,257[B]YU 257[B]YJ1>
19	85-HKD-011-010		KNOB,SL SBASS<EXCEPT 257[B]Y1 257[B]YU,257[B]YJ1>
A	87-078-139-019		SCREW-SERR,M1.4-2.5 B<257[B]Y1 257[B]YU,257[B]YJ1>
A	87-078-153-019		SCREW-SERR,M1.4-2.5 CR<EXCEPT 257[B]Y1,257[B]YU,257[B]YJ1>
B	87-067-753-019		V+1.4-1.6 BLK N<257[B]Y1 257[B]YU,257[B]YJ1>
B	87-067-754-019		V+1.4-1.6 CRN<EXCEPT 257[B]Y1 257[B]YU,257[B]YJ1>
C	87-262-509-319		V+1.4-4 BLK
D	87-067-351-019		SCREW CABINET M1.4(B)
E	87-067-511-019		S-SCRW,+1.4-2(BLK)
F	87-078-107-019		S-SCRW,1.4-0.7B NL<EXCEPT 257[B]Y1,257[B]YU,257[B]YJ1>
F	87-078-108-019		S-SCREW,1.4-0.7 CR<257[B]Y1 257[B]YU,257[B]YJ1>
G	87-067-746-019		SCREW-SERR M1.4-2
H	87-067-384-019		VT+1.4-3.5(HL)
I	85-HK6-208-010		SCRW-SR,+1.4-2.2B L<257[B]Y1 257[B]YU,257[B]YJ1>
I	85-HKD-201-019		S-SCREW,SR+1.4-2.2 CR<EXCEPT 257[B]Y1,257[B]YU,257[B]YJ1>
J	87-078-206-019		S-SCREW,1.4-0.6 B NL<257[B]Y1 257[B]YU,257[B]YJ1>
J	87-078-207-019		S-SCREW,1.4-0.6 CR NL<EXCEPT 257[B]Y1,257[B]YU,257[B]YJ1>
K	87-262-509-319		V+1.4-4 BLK<257[B]Y1,257[B]YU 257[B]YJ1>
K	87-264-509-319		V+1.4-4.0 CR<EXCEPT 257[B]Y1 257[B]YU,257[B]YJ1>

TAPE MECHANISM EXPLODED VIEW 1/1



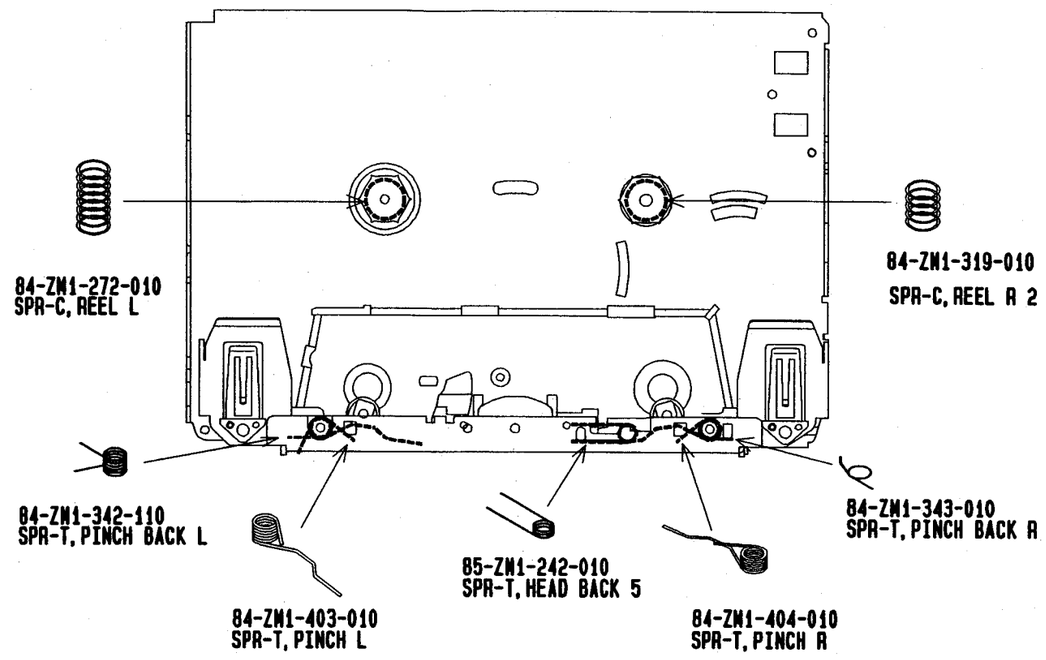


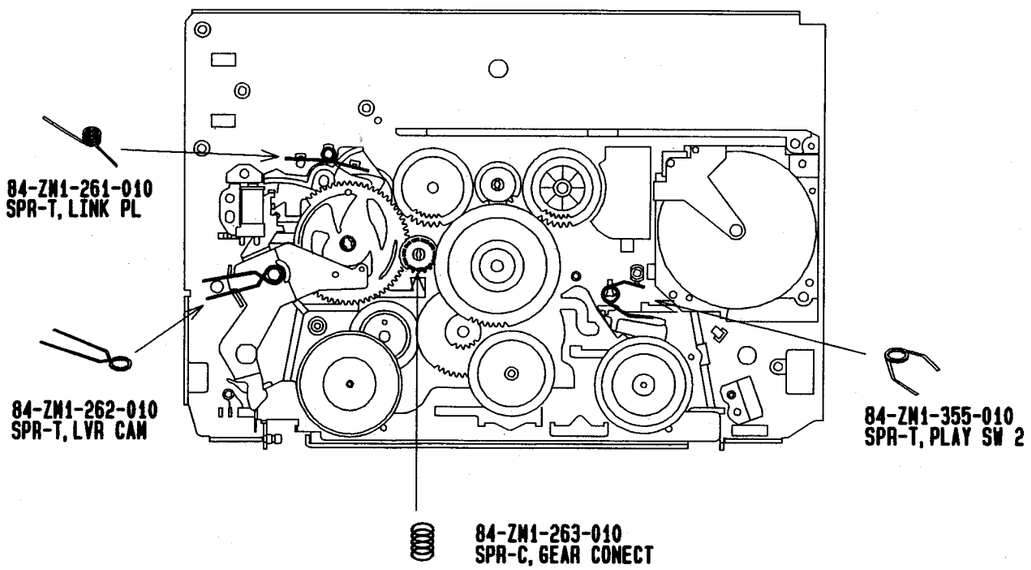
TAPE MECHANISM PARTS LIST 1／1

DESCRIPTIONで判断できない物は “REFERENCE NAME LIST” を参照してください。
If can’t understand for Description please kindly refer to “REFERENCE NAME LIST”.

REF. NO	PART NO.	カンリ NO.	DESCRIPTION
1	84-ZM1-201-01K		OUT-SERT ASSY
2	84-ZM1-212-810		HLDER CASSET ASSY P
3	85-ZM1-242-010		SPR-T,HEAD BACK 5
4	84-ZM1-259-010		ARM,STOP
5	84-ZM1-270-110		ARM HEAD SN
6	84-ZM1-342-110		SPR-T PINCH BACK L
7	84-ZM1-409-010		ARM ASSY PINCH L 2
8	84-ZM1-403-010		SPR-T,PINCH L
9	84-ZM1-408-110		ARM ASSY,PINCH R 50
10	84-ZM1-343-010		SPR-T PINCH BACK R
11	84-ZM1-404-010		SPR-T,PINCH R
12	84-ZM1-227-110		GEAR REEL L
13	84-ZM1-272-010		SPR-C,REEL L
14	84-ZM1-220-110		REEL CAP,R
15	84-ZM1-319-010		SPR-C,REEL R 2
17	84-ZM1-605-010		SOL,MD REC
18	84-ZM1-602-010		CHIP,SOL
19	84-ZM1-219-110		LINK PL
20	84-ZM1-262-010		SPR-T,LVR CAM
21	84-ZM1-204-010		LVR ASSY,CAM
22	84-ZM1-261-010		SPR-T,LINK PL
23	84-ZM1-316-110		FW ASSY L SM
24	84-ZM1-231-510		SLIP ASSY
25	84-ZM1-238-010		FW ASSY R
26	84-ZM1-280-010		PULLY PM
27	84-ZM1-208-010		LVR ASSY HEAD
29	84-ZM1-218-110		BELT
30	84-ZM1-226-010		GEAR CAM C
31	84-ZM1-263-010		SPR-C,GEAR CONECT
32	84-ZM1-225-110		GEAR FR
33	84-ZM1-271-010		SH AUTO
34	84-ZM1-240-010		GEAR IDLE B
35	84-ZM1-221-310		GEAR CAM
36	84-ZM1-223-410		GEAR LINK B
37	84-ZM1-222-110		GEAR LINK A
38	84-ZM1-217-210		L,FR LOCK
40	84-ZM1-210-110		LVR ASSY,T-UP
41	84-ZM1-224-110		GEAR IDLE A
42	84-ZM1-228-110		GEAR REEL R
43	84-ZM1-355-010		SPR-T,PLAY SW 2
44	84-ZM1-379-110		SPR-P,MOT
45	M8-4ZS-190-000		ABL-20
46	84-ZM1-383-010		THRUST PLATE
A	87-067-569-019		PW,0.83-2.5-0.25SLT
B	87-078-099-010		S-SCREW,V+1.4-6
C	87-067-384-019		VT+1.4-3.5(HL)
D	87-067-367-019		PW,0.95-2.6-0.25C
E	87-067-860-019		PW,3-0.95-0.4
F	87-078-018-019		PW,1.55-3.5-0.25 C60
G	87-078-071-019		SW,1.2-3-0.25
H	87-078-101-010		RW,1.21-2.4-0.25
I	87-078-065-019		SH,0.9-2.25-0.25
J	87-067-693-019		PW,3-0.8-0.25 SLT
L	87-B10-015-019		W,1-3-0.35
M	87-078-125-010		S-SCREW,V+1.4-0.9

SPRING APPLICATION POSITION





REFERENCE NAME LIST

ELECTRICAL SECTION

DESCRIPTION	REFERENCE NAME
ANT	ANTENNAS
C-	CHIP
C-CAP	CAP, CHIP
C-CAP TN	CAP, CHIP TANTALUM
C-COIL	COIL, CHIP
C-DI	DIODE, CHIP
C-DIODE	DIODE, CHIP
C-FET	FET, CHIP
C-FOTR	FILTER, CHIP
C-JACK	JACK, CHIP
C-LED	LED, CHIP
C-RES	RES, CHIP
C-SFR	SFR, CHIP
C-SLIDE SW	SLIDE SWITCH, CHIP
C-SW	SWITCH, CHIP
C-TR	TRANSISTOR, CHIP
C-VR	VOLUME, CHIP
C-ZENER	ZENER, CHIP
CAP, CER	CAP, CERA-SOL
CAP, E	CAP, ELECT
CAP, M/F	CAP, FILM
CAP, TC	CAP, CERA-SOL
CAP, TC-U	CAP, CERA-SOL SS
CAP, TN	CAP, TANTALUM
CERA FIL	FILTER, CERAMIC
CF	FILTER, CERAMIC
DL	DELAY LINE
E/CAP	CAP, ELECT
FILT	FILTER
FLTR	FILTER
FUSE RES	RES, FUSE
MOT	MOTOR
P-DIODE	PHOTO DIODE
P-SNSR	PHOTO SENSER
P-TR	PHOTO TRANSISTOR
POLY VARI	VARIABLE CAPACITOR
PPCAP	CAP, PP
PT	POWER TRANSFORMER
PTR, RES	PTR, MELF
RC	REMOTE CONTROLLER
RES NF	RES, NON-FLAMMABLE
RESO	RESONATOR
SHLD	SHIELD
SOL	SOLENOID
SPKR	SPEAKER
SW, LVR	SWITCH, LEVER
SW, RTRY	SWITCH, ROTARY
SW, SL	SWITCH, SLIDE
TC CAP	CAP, CERA-SOL
THMS	THERMISTOR
TR	TRANSISTOR
TRIMMER	CAP, TRIMMER
TUN-CAP	VARIABLE CAPACITOR
VIB, CER	RESONATOR, CERAMIC
VIB, XTAL	RESONATOR, CRYSTAL
VR	VOLUME
ZENER	DIODE, ZENER
サージサプレッサ	SERGESUPPRESSOR
セラコン	CAP,CERA

MECHANICAL SECTION

DESCRIPTION	REFERENCE NAME
ADHESHIVE	SHEET ADHESHIVE
AZ	AZIMUTH
BAR-ANT	BAR-ANTENNA
BAT	BATTERY
BATT	BATTERY
BRG	BEARING
BTN	BUTTON
CAB	CABINET
CASS	CASSETTE
CHAS	CHASSIS
CLR	COLLAR
CONT	CONTROL
CRSR	CURSOR
CU	CUSHION
CUSH	CUSHION
DIR	DIRECTION
DUBB	DUBBING
FL	FRONT LOADING
FLY-WHL	FLYWHEEL
FR	FRONT
FUN	FUNCTION
G-CU	G-CUSHION
HDL	HANDOL
HIMERON	CLOTH
HINGE, BAT	HINGE, BATTERY
HLDR	HOLDER
HT-SINK	HEAT SINK
IB	INSTRUCTION BOOKLET
IDLE	IDLER
IND, L-R	INDICATOR, L-R
KEY, CONT	KEY, CONTROL
KEY, PRGM	KEY, PROGRAM
KNOB, SL	KNOB, SLIDE
LBL	LABEL
LID, BATT	LID, BATTERY
LID, CASS	LID, CASSETTE
LVR	LEVER
P-SP	P-SPRING
PANEL, CONT	PANEL, CONTROL
PANEL, FR	PANEL, FRONT
PRGM	PROGRAM
PULLY, LOAD MO	PULLY, LOAD MOTOR
RBN	RIBBON
S-	SPECIAL
SEG	SEGMENT
SH	SHEET
SHLD-SH	SHIELD-SHEET
SL	SLIDE
SP	SPRING
SP-SCREW	SPECIAL-SCREW
SPACER, BAT	SPACER, BATTERY
SPR	SPRING
SPR-P	P-SPRING
SPR-PC-PUSH	P-SPRING, C-PUSH
T-SP	T-SPRING
TERM	TERMINAL
TRIG	TRIGGER
TUN	TUNING
VOL	VOLUME
W	WASHER
WHL	WHEEL
WORM-WHL	WORM-WHEEL
ジグアーム	ARM,SHAFT
ジグガイド	GUIDE,SHAFT
ストラップ	STRAP
トクナベ	S-SCREW
ヒンジ	HINGE
ヒンジビス	S-SCREW
ビスセレート	SCREW,SERRART

サービス技術ニュース	
番号	連絡内容
G一　一	
G一　一	
G一　一	

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